



CalixKlippan

Product verification

Climate chamber Calix



Dimensions: 7,0 x 4,0 x 3,0m (*l w h*)
Opening dimensions: 2,78 x 3,10m (*l h*)
Temperature range: -40 to +60° C

Crash test track Klippan Sweden



Key Specification

- Track length: 30 m
- Brake type "Bending Bar"
- High Speed Camera Recording (1 000 fps)
- Multiple load cell possibilities

Characteristics

- Depending on pulse requirements
- Sled load capacity (incl. fixture): up to 500 kg
- Speed: up to 50 km/h
- Deceleration: up to 50 g
- Crash pulses acc to: UN ECE R16
UN ECE R17

Customer Specific Requirements

R&D capabilities

All CKAB companies

CFD (Computational Fluid Dynamics)

- Simulation examples of aero dynamics and noise levels

FEM

- Simulation of structural strength

R&D engineering resources

- Mechanical
- Electrical
- Simulation
- Automation and process
- Validation
- Tooling

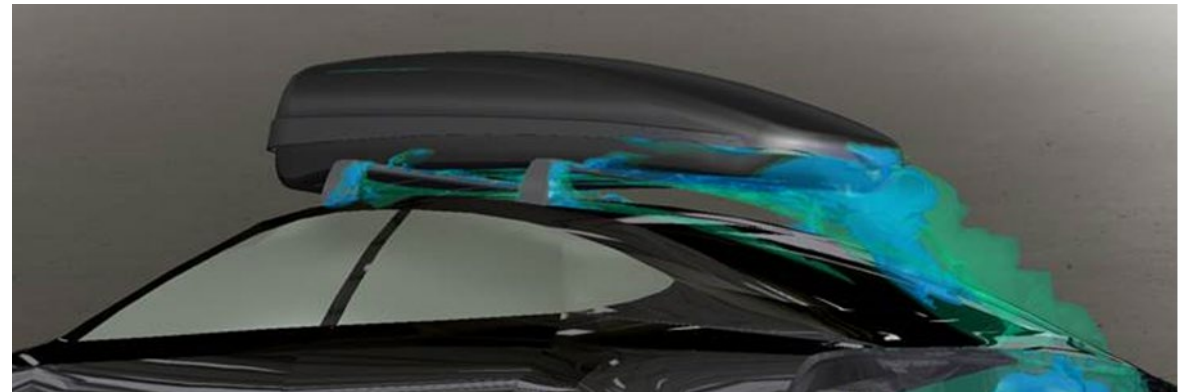
Utilised softwares

CAD

- Catia
- Siemens NX
- Solid works

CAA

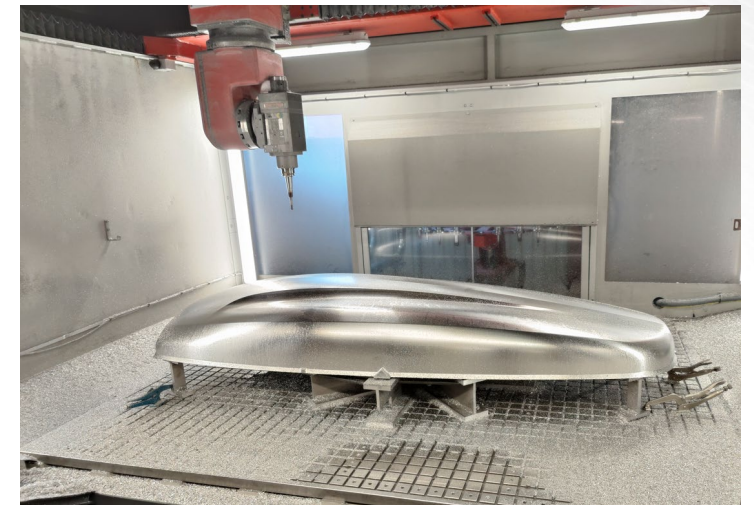
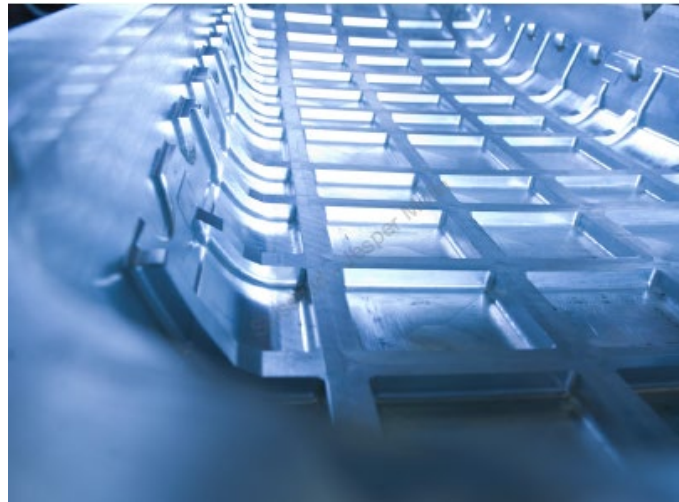
- LS Dyna
- CFD



Tool manufacturing

Autoform

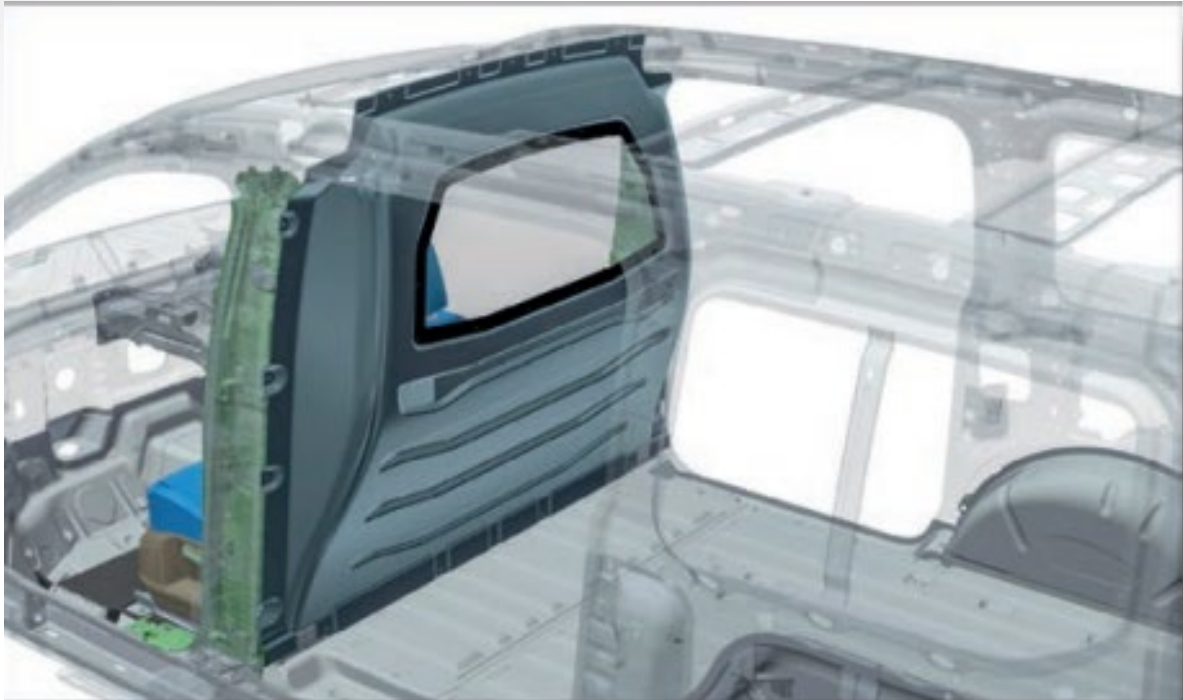
- PDM - complete part/tool history
- In house tool engineering and production = short lead time
- 4 CNC tooling mills
- Maximum tool size 3,5 x 2,5 x 1,0m (l w h)
- Maximum tool weight 6000 kg
- Mechanical workshop



Flocking

Safeman

Flocking is a process of depositing many small fiber particles onto a surface. It can also be performed for functional reasons including insulation, slip-or-grip, friction, retention of a liquid film, and low reflectivity.



Biomaterials

Autoform

Certified sustainable materials

- Delivery of sustainable certified raw materials
- ISCC PLUS*- certified (International Sustainability and Carbon Certification)
- Bio based and circular synthetic material
- Chemical identified material of sustainable source possible



Bio Research Project

- Joint project with the Royal Institute of Technology in Stockholm (KTH)
- Development of alternative materials with a focus on recyclability and characteristics
- Focus on regenerative waste products of forestry and agriculture e.g. cellulosic and lignin material of wood.

